Harmonizing Rights and Rewards: Music NFTs as a Paradigm for Equitable Compensation in the Digital Era

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Abstract: This paper provides a critical examination of Music Non-Fungible Tokens (NFTs) within the context of the digital transformation of the music industry, focusing on the implications for equitable artist compensation. As digitalization reshapes consumption and revenue models, the advent of Music NFTs, predicated on blockchain technology, presents a nuanced paradigm for artist-fan interactions and compensation structures. Through an interdisciplinary methodology that integrates literature review and expert interviews, this study scrutinizes the operational mechanisms of Music NFTs, their potential to reconfigure the economics of music production, and the attendant legal and technical challenges. While Music NFTs proffer an innovative approach to direct artist revenue and engagement, this inquiry reveals a complex landscape fraught with legal ambiguities, technological hurdles, and market volatility. The findings underscore the dialectical relationship between the potential benefits of Music NFTs for artists and the prevailing challenges that circumscribe their efficacy.

Keywords: Music Non-Fungible Tokens (NFTs), Blockchain Technology, Digital Music Industry, Artist Compensation, Intellectual Property Rights.

1. Introduction

The music industry has undergone a significant transformation due to digitalization, profoundly affecting how music is consumed and how artists are compensated. The streaming model introduced in 2006 by Daniel Ek exemplifies this change, offering an average payout of about $0.004 per streamed song. However, this amount is often split between the record label and the artist, with the artist typically receiving a smaller portion (Ginsburg, 2022; Dokalik, 2017). This shift towards digitalization and the challenges it presents for equitable artist compensation set the potential stage for the emergence of blockchain technologies, initially conceptualized for financial transactions but increasingly relevant in creative industries like music.

The foundations of today's blockchain technologies are often attributed to the white paper "Bitcoin: A Peer-to-Peer Electronic Cash System" by the pseudonymous author Satoshi Nakamoto in 2008. Bitcoin exemplifies a public blockchain, where a digital record is replicated across many locations (nodes), each managed by different individuals or entities. This decentralized system enables consensus without direct agreement among these parties. While blockchain is adept at providing tamper-proof transaction records, its capacity to verify external information, such as details in an attached text message or token ownership beyond its presence in a legitimate blockchain wallet, is limited. Blockchains continuously produce new data blocks, cryptographically linked, with functionalities varying among different blockchain systems. Some, for instance, enable users to create their own tokens and contracts (Grech & Camilleri, 2017).

In 2021, the rise of Non-Fungible Tokens (NFTs) marked a significant shift, introducing a novel digital music format. These Music NFTs, based on blockchain technology, allow the creation and direct trade of unique digital items between artists and fans. Offering more than just digital files, Music NFTs can include various offerings like songs, collections, albums, exclusive experiences, or merchandise items, thereby expanding the scope of digital music (Fortnow & Terry, 2022).

As described by Pfeiffer et al. (2021), Non-Fungible Tokens (NFTs) are multifaceted in their appearance and function within the blockchain ecosystem, and they can manifest in various forms:

- The most common form involves generating a unique token for each instance, where each token possesses distinct asset properties and metadata. This approach aligns with the widely accepted definition and application of an NFT.
- Alternatively, it is possible to create multiple tokens, starting from two, that share identical asset properties and asset IDs. The differentiation among these tokens lies in their metadata, which varies with each token's transmission.

- A third, more innovative approach is the creation of a token series, drawing inspiration from the serial nature of blockchain-based art (Jutel, 2021). This method represents a hybrid of the first two, where each token is unique but shares certain asset properties with others created at the same time, allowing each to maintain its distinct asset ID.

In all these scenarios, there is a dual-layer structure: on one side, the blockchain-based asset holds legal data and serves as an ownership certificate, and on the other side, the media file resides on an IPFS server. This server utilizes a peer-to-peer hypermedia protocol, allowing users to clone the file with their own IPFS Node.

Music NFTs also present an innovative approach to music financing. Artists can sell shares of their songs, inviting investments in their music. This model promises a larger revenue share for the artists, potentially improving their financial sustainability. Furthermore, the blockchain's ability to trace the origins of these NFTs enables artists to benefit from secondary sales, receiving a predetermined portion from each resale (PwC, 2018). The introduction of Music NFTs represents more than just a new revenue model; it signifies a shift in artist-fan interaction. Through direct sales and diverse communication channels enabled by blockchain technology, artists can establish a closer, more dynamic relationship with their audience.

This study aims to explore the potential and opportunities of Music NFTs in the music industry. It aims to assess whether this innovative model can be successfully integrated into the market and provide fair compensation for artists, marking a significant turn in the digital music landscape.

2. Methodology

The exploration of NFTs in the music industry was grounded in literature research covering key areas such as blockchain technology, Music NFTs, and the structures of the music industry. This theoretical insight set the foundation for validating our understanding through problem-centered expert interviews (Meuser & Nagel, 2009). These interviews aimed to bridge the gap between theoretical knowledge and practical application in the field. A wide spectrum of professionals from the NFT ecosystem was consulted, including NFT artists, lawyers, blockchain specialists, and experts from the music industry and music business research. This approach allowed for cross-validation of theoretical findings with industry insights and assessment of the practical applicability of the concepts. By integrating the insights from literature and expert interviews, this research comprehensively addresses both theoretical and practical aspects. The interviews were conducted individually via Zoom, recorded with the consent of the participants, and subsequently transcribed for analysis. The experts consulted in this study were:

- Expert in Legal Aspects & Blockchain Technology: Offering insights into the legal and taxation aspects related to blockchain and Music NFTs. (NS)
- Legal Expert with a Focus on Copyright Law: Providing a legal perspective on the application of Music NFTs within the broader legal framework. (PK)
- Specialist in Music NFTs: Sharing expertise in the practical implementation of Music NFTs, including successful project launches. (FS)
- Professional in Music Rights and Investments: Offering a unique view on the intersection of music rights, investment, and the role of Music NFTs. (CS)
- Blockchain Technology Expert: Focusing on Ethereum and other blockchain technologies, contributing insights on transaction registers and smart contract development. (JD)
- Music Industry Professional: Bringing an industry viewpoint on artist signing strategies, project management, and the integration of new technologies. (NN)
- Academic with Expertise in Music Economy: Providing an academic perspective on the economic aspects of music and the impact of emerging technologies. (PT)

3. Results

The following chapter explores an expanded scope of critical aspects surrounding NFTs in the industry. It delves into six key areas: the overarching potential of blockchain technology in music and its advantages, the complex legal and technological challenges, the issues of market acceptance and security risks, the importance and challenges of ERC standards, the intricacies of direct artist-fan relationships in a decentralized environment, and the evolving landscape of Music NFTs. This comprehensive exploration aims to offer a deeper understanding of the current state and future potential of Music NFTs, encapsulating a confluence of expert opinions, practical insights, and findings from extensive literature review.

3.1 Potential and Advantages of Blockchain in the Music Industry

The study reveals that blockchain technology is promising for the music industry. Experts JD and CS noted its potential to eliminate intermediaries, create immutability and transparency, shorten distribution channels, and offer unique value-added services like special fan experiences (PwC, 2018). FS emphasized the opportunity for innovative creative pathways, moving beyond traditional music mediums, and forging new fan connections. This aligns with literature indicating blockchain's role in facilitating new forms of music financing through direct license trading, suggesting a shift towards genuine value exchanges in music.

3.2 Legal and Technological Framework Challenges

A significant hurdle for Music NFTs is the legal framework. NS, PK, and NN highlighted the legal grey area surrounding NFTs, echoing literature that questions the clarity of ownership and usage rights associated with digital works (Kaulartz, Schmid, 2021; Hu et al., 2021). The complexity of music copyright law and the necessity for comprehensive legal education were noted as crucial for safely navigating the Music NFT market. McLellan & Leung (2022) support this, suggesting a need for contractual foundations to define these relationships clearly.

3.3 Market Acceptance and Security Risks

The study found that market acceptance and security are major concerns. CS pointed out the impact of several fraud cases and the cryptocurrency crash on the Music NFT market, which has led to significant losses and a decline in market confidence (Hauck, 2022; Smith, 2023; finanzen.net, 2022). This uncertainty has led to a shift in how artists refer to their NFT-based works, moving towards terms like "digital collectibles" and "music shares" to avoid the negative connotations associated with NFTs.

3.4 ERC Standards and Decentralization in Music Industry

A lack of suitable ERC standards for Music NFTs prevents proper metadata integration and automatic royalty distribution, as per FS's observations. CS, however, questioned the necessity of fully automated systems, suggesting that the decentralization principle in the music industry might render such automation less critical. The literature (Hu et al., 2021; Botero et al., 2022) also discusses the need for standards that cater specifically to the metadata of music files to enable efficient management and monetization.

3.5 The Complexity of Direct Artist-Fan Relationships

The elimination of intermediaries, while beneficial, presents challenges for emerging artists who must find ways to connect with their audience. PT highlighted the complexities of self-promotion and market visibility for artists working independently. The possibility of NFT platforms offering solutions for artist visibility, albeit for a fee, suggests a need for careful consideration to ensure artists retain a larger share of profits.

3.6 The Evolving Landscape of Music NFTs

Despite the challenges, the potential of Music NFTs in reshaping the music industry remains significant. The study indicates that legal and technological maturation, market education, and the development of standards tailored to the unique needs of the music industry are crucial for the widespread adoption and success of Music NFTs.

3.7 Future Prospects and Opportunities

Despite existing challenges, the potential of Music NFTs for enhancing artist engagement and creating new revenue models is undeniable. The opportunities for acquiring licenses and benefiting from secondary sales, as discussed by experts and supported by PwC (2018), indicate a promising future for musicians. Yet, the journey to a holistic solution for equitable compensation involves navigating the complex landscape of legal, technical, and public acceptance issues.

Having explored the diverse facets of Music NFTs in the music industry, it becomes evident that while the potential is vast, so are the challenges. The journey ahead in fully harnessing the capabilities of Music NFTs is laden with complexities that demand further exploration. In the following section, we will pivot to future research, outlining the areas that require deeper investigation and the prospects that hold promise for the evolution of Music NFTs and their role in reshaping the music industry landscape.

4. Conclusion, Limitations and Further Research

In this paper, we have delved into the transformative potential of Music Non-Fungible Tokens (NFTs) within the evolving digital landscape of the music industry. By employing a qualitative research methodology that incorporated problem-centered expert interviews, this study aimed to uncover both the promising prospects and the significant challenges Music NFTs present for ensuring fair compensation for artists. The findings of this research underscore the enthusiasm shared by experts regarding the capability of blockchain technology to revolutionize the music industry. These professionals highlighted numerous advantages, such as eliminating intermediaries, enhancing transparency, and offering novel avenues for artist-fan engagement. Expert insights emphasized the innovative nature of Music NFTs, which extend beyond mere digital assets to include exclusive experiences and merchandise, thereby forging deeper connections between artists and their audience.

However, the interviews also shed light on substantial hurdles. Legal uncertainties surrounding the ownership and rights associated with Music NFTs were recurrent themes, with experts stressing the need for a robust legal framework to navigate this new terrain. The technological readiness of blockchain systems for widespread adoption in the music industry was another concern echoed by interviewees, who highlighted the necessity for standards that cater specifically to the music sector. The study also revealed the complexities of direct artist-fan relationships facilitated by Music NFTs. While the decentralization aspect offers greater control and potentially higher revenue for artists, the challenges of self-promotion and establishing visibility in a saturated market remain significant. Experts suggested that despite the removal of traditional intermediaries, new forms of platforms and services might emerge, offering visibility solutions at a cost, thereby emphasizing the need for artists to remain vigilant about the terms of these new relationships.

In conclusion, this paper has highlighted the dualistic nature of Music NFTs in the music industry: their potential to empower artists and transform industry dynamics is significant, yet it is equally matched by a set of formidable challenges that require careful navigation. The integration of expert insights with theoretical perspectives has provided a comprehensive view of the current state and future possibilities of Music NFTs, laying the groundwork for further research to explore the nuanced interplay of legal, technological, and market factors in this emerging domain.

A central limitation of this study is the relatively new domain of Music NFTs, resulting in limited availability of specialized literature. Most sources are online contributions that might only superficially address the topic. Additionally, the technology is constantly evolving, which means new forms of usage or significant developments might emerge post-study. The number of Austrian artists deeply engaged with this technology is relatively limited, allowing for only a few different perspectives to be considered.

Future research should focus on the legal aspects, particularly how copyright law and property rights of Music NFTs can be best regulated to protect both artists and buyers. The need to develop an adequate ERC standard for Music NFTs is crucial to enable correct and comprehensive metadata for music works. Furthermore, the exploration of second-layer solutions to reduce transaction costs and improve blockchain scalability for mass operation is warranted. The decoupling of cryptocurrency in relation to NFTs merits discussion, as it could help lower barriers to mass application. Lastly, enhancing security and protecting against fraud is vital. It is important to identify security gaps and develop structures to ensure the authenticity of Music NFTs.

AI-Disclaimer

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References

Ballhaus, W., Weyßer, M., Perfall, A., Brockmann, S., Siadat, A., Wipper, A., Stallmeier, L., & Schulze Bröring, H. (2018). Nach dem Streaming kommt die Blockchain: Hype oder echte Chance für die Musikindustrie? PricewaterhouseCoopers (PwC) GmbH Wirtschaftsprüfungsgesellschaft.

Botero, A., Amaya, P., & Spielburg, Y. (2022). Splitting the difference: Music and Web3's multiplayer problem. Water & Music. Available at: https://www.waterandmusic.com/splitting-the-difference-music-and-web3s-multiplayer-problem/ [Accessed 1 January 2024].

Dokalik, D., Fischer, P., & Waldingbrett, I. (2017). Musik-Urheberrecht. Österreichisches Urheberrecht für Komponisten, Musiker, Musiknutzer und Produzenten (3rd ed.). NWV Neuer Wissenschaftlicher Verlag.

Fortnow, M., & Terry, Q. (2022). The NFT Handbook: How to create, sell and buy Non-Fungible Tokens. John Wiley & Sons, Inc., Hoboken, New Jersey.

Ginsburg, R. (2022). What is the Metaverse? A Complete Guide to Our Web3 Future. nftnow. Available at: https://nftnow.com/guides/what-is-the-metaverse-a-complete-guide-to-our-web3-future/ [Accessed 1 January 2024].

Grech, A., & Camilleri, A. (2017). Blockchain in Education. Available at: https://doi.org/10.2760/60649 [Accessed January 2020].

Hauck, F. (2022). Krypto-Crash. blockchaincenter.net. Available at: https://www.blockchaincenter.net/krypto-crash/ [Accessed 25 March 2023].

Hu, C., Chatfield, H., Xhjyl, J., Spallone, J., Hughes, G., & Landowski, B. (2021). The state of music/Web3 tools for artists. Water & Music. Available at: https://www.waterandmusic.com/the-state-of-music-web3-tools-for-artists/ [Accessed 1 January 2024].

Jutel, O. (2021). Blockchain imperialism in the Pacific. Big Data & Society, 8(1), 2053951720985249. Available at: https://doi.org/10.1177/2053951720985249.

Kaulartz, M., & Schmid, A. (2021). Rechtliche Herausforderungen sog. Non-Fungible Token (NFTs). Available at: https://www.cmshs-bloggt.de/tmc/rechtliche-herausforderungen-sog-non-fungible-token-nfts/ [Accessed 1 January 2024].

McLellan, J., & Leung, A. (2022). NFT Ownership and Intellectual Property: What Are Your Rights? Available at: https://www.haldanes.com/nft-ownership-and-intellectual-property-what-do-you-own/#_ftn6 [Accessed 25 March 2023].

Meuser, M., & Nagel, U. (2009). The expert interview and changes in knowledge production. In A. Bogner, B. Littig, & W. Menz (Eds.), Interviewing Experts (pp. 17-42). Palgrave Macmillan.

Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System. Available at: https://bitcoin.org/bitcoin.pdf [Accessed January 2024].

Pfeiffer, A., Bezzina, S., & Wernbacher, T. (2021). Use of Blockchain Technologies Within the Creative Industry to Combat Fraud in the Production and (Re)Sale of Collectibles. In ECCWS 21 proceedings, https://doi.org/10.34190/EWS.21.055.

Smith, H. (2023). Bitcoin crash: what was behind the crypto collapse? The Times UK. Available at: https://www.thetimes.co.uk/money-mentor/article/is-bitcoin-crash-coming/ [Accessed 1 January 2024].